

CLAIMS

1. An integrated circuit package power cell electrode, comprising:
an electrically conductive, substantially planar body having a first thickness and a junction area, the junction area configured to receive a power cell having a second thickness; and
an arcuate terminal electrically coupled to the body and configured to position a wire bond terminus at a perpendicular distance from the body, the distance not being substantially less than the sum of the first and second thicknesses.
2. The electrode recited in Claim 1 wherein the terminal is integral to the body.
3. The electrode recited in Claim 1 further comprising an insulating layer substantially covering a surface of each of the body and the terminal opposite the junction area.
4. The electrode recited in Claim 1 further comprising a coating of electrical conduction enhancing material on at least the junction area.
5. The electrode recited in Claim 1 wherein the body and the terminal each comprise copper.
6. The electrode recited in Claim 1 wherein the body and the terminal each comprise copper and nickel.
7. An integrated circuit package, comprising:
a lead frame assembly, including:
a central support member having opposing first and second major surfaces; and
a plurality of conductive leads radially disposed about the periphery of the central support member;
an integrated circuit die coupled to the first surface and having a plurality of bond pads;
a plurality of first wire bonds each coupling one of the bond pads and one of the conductive leads;
a second wire bond having a first terminus coupled to one of the bond pads;

a power cell coupled to the second surface; and
an electrode, including:

a planar body coupled to the power cell opposite the central support member; and

a terminal coupled to the body and configured to position a second terminus of the second wire bond in a reference plane that is substantially coincident with the first surface.

8. The package recited in Claim 7 wherein the power cell includes:

a separator layer located between the electrode and the central support member;

an anode layer located between the separator layer and one of the electrode and the central support member; and

a cathode layer located adjacent the separator opposite the anode layer.

9. The package recited in Claim 8 wherein the cathode layer includes manganese dioxide, the separator layer includes lithium perchlorate and the anode layer includes lithium foil.

10. The package recited in Claim 7 wherein the terminal is integral to the body.

11. The package recited in Claim 7 further comprising an insulating layer substantially covering surfaces of the body and the terminal that are opposite the power cell.

12. The package recited in Claim 11 wherein the insulating layer comprises a paper material.

13. The package recited in Claim 11 wherein the insulating layer comprises a polyester film material.

14. The package recited in Claim 7 wherein the body and the terminal each comprise copper.

15. The package recited in Claim 7 wherein the body and the terminal each comprise copper and nickel.

16. The package recited in Claim 7 further comprising a coating of electrical conduction enhancing material on at least one surface of the electrode.

17. The package recited in Claim 16 wherein the electrical conduction enhancement material is a graphite based, air-curable material.

18. The package recited in Claim 16 wherein the electrical conduction enhancement material is a graphite based, heat-curable material.

19. A method of manufacturing an integrated circuit package, comprising:
providing a lead frame assembly, including:
a central support member having opposing first and second major surfaces; and
a plurality of conductive leads radially disposed about the periphery of the central support member;
coupling an integrated circuit die to the first surface, the integrated circuit die having a plurality of bond pads;
coupling ones of the bond pads to ones of the conductive leads via a plurality of first wire bonds;
coupling a first terminus of a second wire bond to one of the bond pads;
coupling a power cell to the second surface;
providing an electrode having a planar body and a terminal coupled to the body, the terminal configured to position a second terminus of the second wire bond substantially coincident with the first surface;
coupling the body to the power cell opposite the die support; and
coupling the terminal to the second terminus.

20. The method recited in Claim 19 wherein the power cell is a laminated, solid state battery.